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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/724,702

12/02/2003

Shun-Yuan Tsai

1981

7590

06/02/2006

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EXAMINER

DANIELS, MATTHEW J

ART UNIT

PAPER NUMBER

1732

DATE MAILED: 06/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/724,702		TSAI, SHUN-YUAN	
	Examiner		Art Unit	
	Matthew J. Daniels		1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. By entry of the amendment filed 14 March 2006, Claims 1-7 were cancelled and new Claims 8-10 were presented.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Rejections set forth previously under this section are withdrawn.
3. **Claims 8-10** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 8 is rejected because it is unclear and indefinite what “refining” (step e) is. Claims 9 and 10 are rejected by dependence.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 8-10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gonzales (USPN 5252525) in view of Cherdron (USPN 4308088) and Mohri (EP 0656319 A2). Gonzales

Art Unit: 1732

teaches the well known and conventional aspects of forming filters namely mixing aluminum oxide and at least porous forming agents and binding agents, molding the mixed filter medium, drying, sintering, and cooling the sintered ceramic filter medium (2:39-3:68). Gonzales is silent to the following aspects of the invention:

- a) using aluminum residue ash
- b and c) the calcination and grinding to a particle size between 250 mesh and 800 mesh
- f) the embryo shape
- i) “finishing” the ceramic filter medium

However, these aspects would have been prima facie obvious for the following reasons:

- a) Cherdrone clearly suggests that it is desirable to use “scrapings”, which are interpreted to be aluminum residue ash, an assertion which Applicant’s remarks do not dispute (see Applicant’s assessment of Cherdrone’s method at page 5, lines 14-19).
- b and c) Mohri clearly teaches calcination (entire document) and milling (page 7, lines 9-12), which the Examiner interprets to be grinding, to produce a particle size falling within the range produced between 250 and 800 mesh (page 7, lines 25-27), and further that particle size is clearly a result effective variable that the ordinary artisan may optimize (Page 8, lines 16-22).
- f) particular shapes of filters are at the discretion of the artisan, and absent persuasive evidence that particular shapes materially affect the method of making claimed these particular shapes are given little patentable weight.
- i) The Examiner asserts that “finishing” reads on any step of removal, mounting, or machining to make the ceramic element suitable for its intended use as a filter element. The Examiner further

Art Unit: 1732

asserts that in order to provide the mounting elements shown in Gonzales' figure, that such finishing has been performed.

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the methods of Cherdron and Mohri into that of Gonzales because Gonzales teaches a method of making a filter, and because Mohri clearly suggests that the calcinations method be used in combination with method for forming a filter element (Page 2, line 36, Page 8, lines 5-7, and elsewhere), and because using scrapings or other slag or dross materials as a raw material would reduce the cost of the raw material and the product produced. **As to Claim 9**, these calcinations temperatures are conventional for alumina, and are taught at least by Mohri (page 4, lines 34-36). **As to Claim 10**, carbides and nitrides or alumina are conventional "stabilizers" for calcining alumina, and are taught by Mohri (Page 3, lines 39-43). These "seed crystal" materials nucleate the alpha phase of alumina during the calcination step and act as stabilizers for this phase.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

Art Unit: 1732

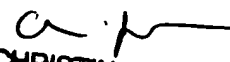
will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Daniels whose telephone number is (571) 272-2450. The examiner can normally be reached on Monday - Friday, 8:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJD 5/29/06



CHRISTINA JOHNSON
PRIMARY EXAMINER
5/30/06